Transportation and Distribution Information Systems (TDIS)

Presentation for
CCO/SMO Conference
21 May 2007

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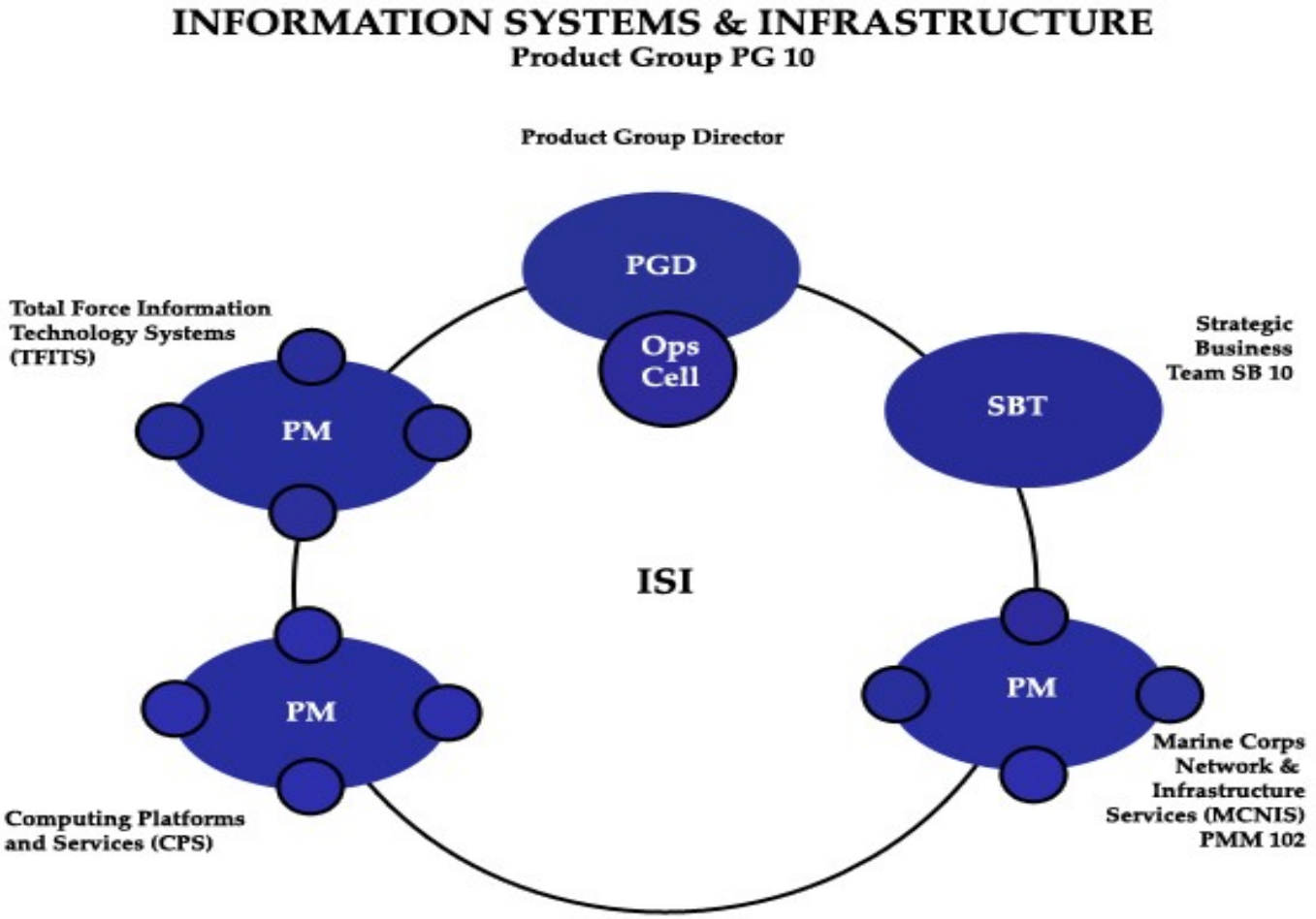
AGENDA

- MARCORSYSCOM Organization
- System/Hardware Requirement Identification
- Software/Hardware Fielding
- Test and evaluation
- MDSS II/ICODES. Data Sharing/pumping, Automated Load Planning, and Air Load Planning
- Enhanced Arrival and Assembly Operations
- Automated capture of Dimensional data (Weigh-in-Motion and Profiling)(DACMS)
- NMCI/ISNS/IA status
- Technical Engineering and Assistance Team (TE&AT)

MARCORSYSCOM Organization



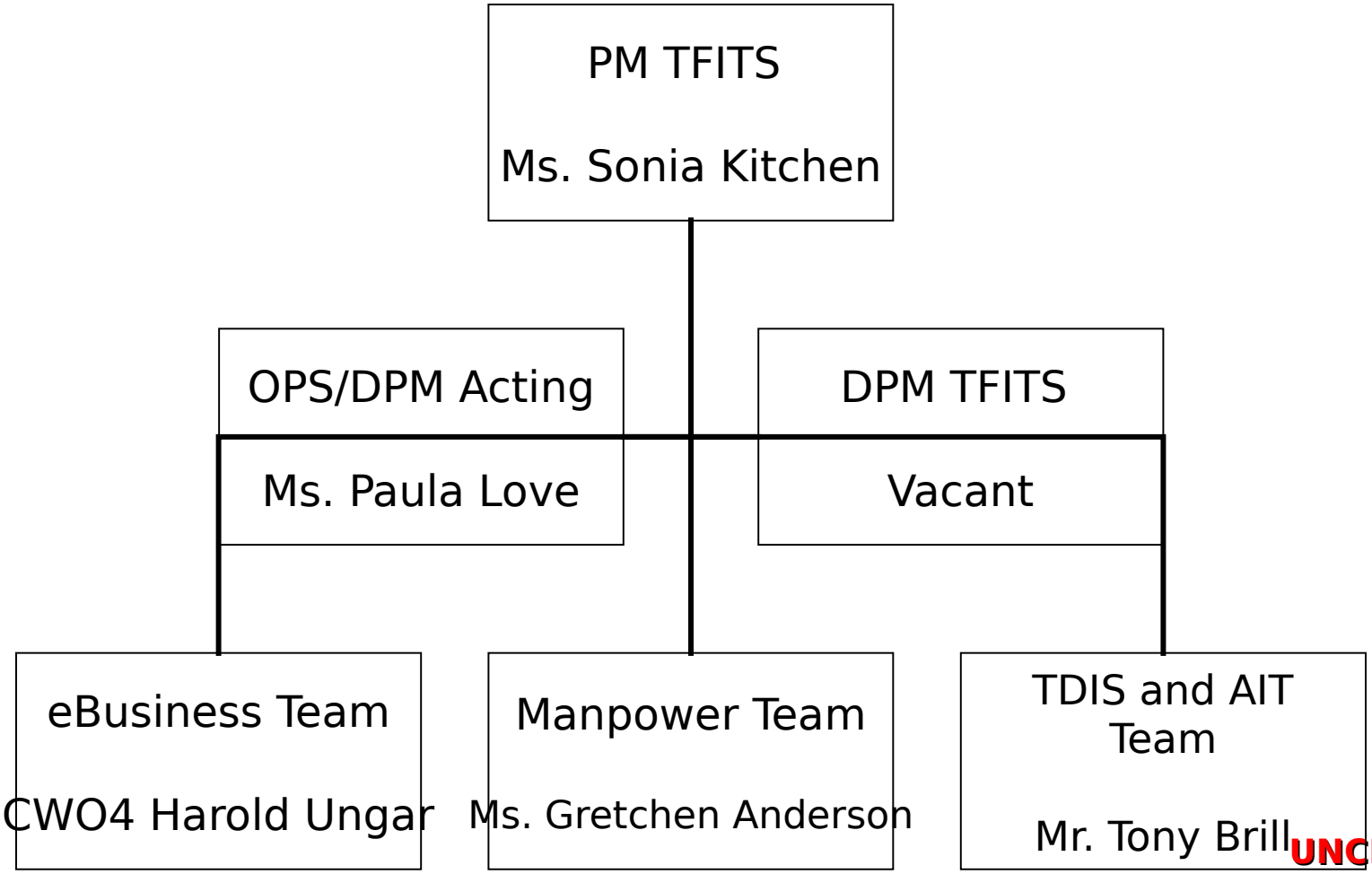
MARCORSYSCOM Organization

Program Manager

Total Force Information Technology Systems

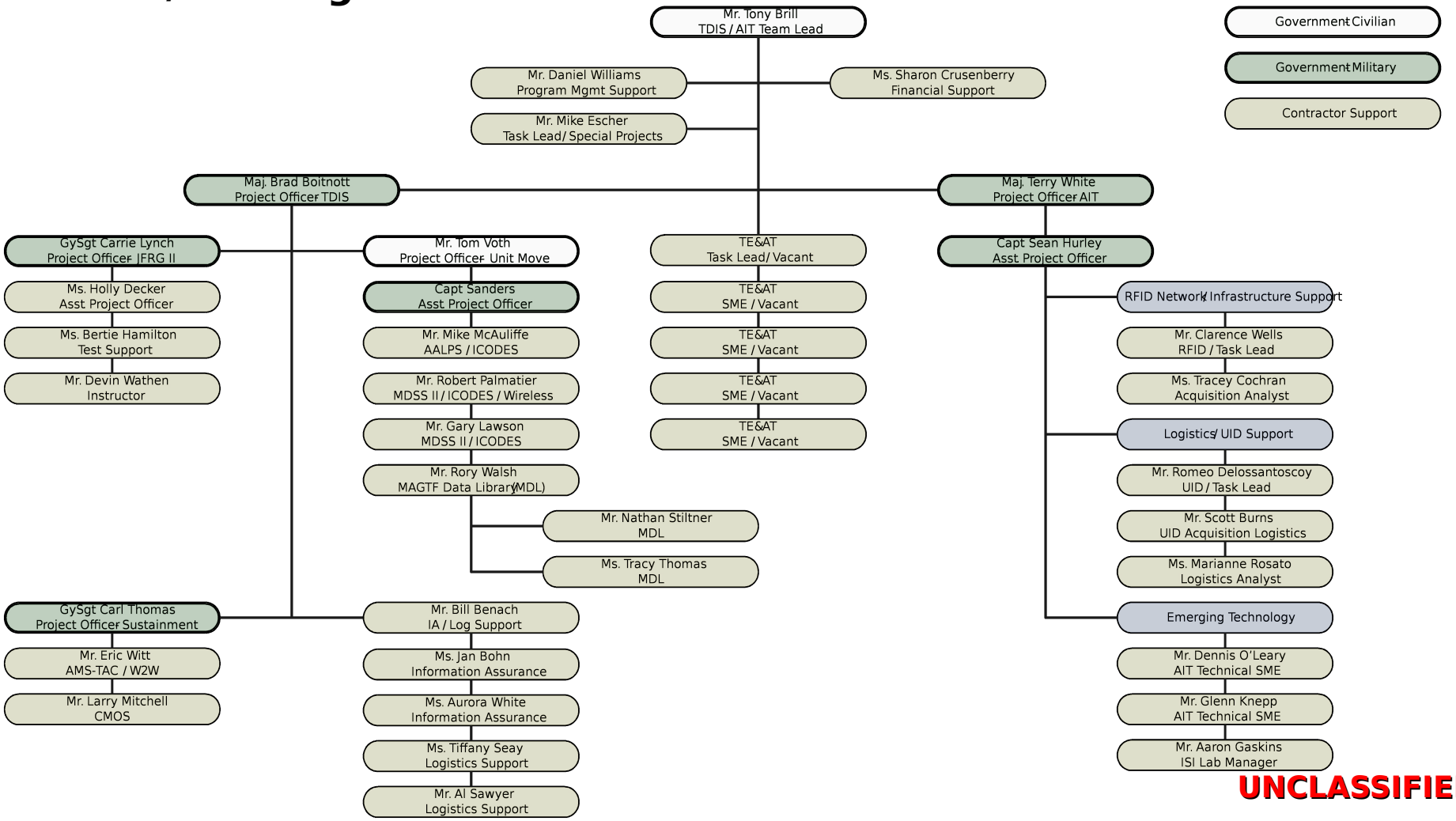
MARCORSYSCOM Organization

PM TFITS Organization



MARCORSYSCOM Organization

TDIS / AIT Organization



MARCORSYSCOM Organization

TDIS & AIT are committed to providing the warfighter with emerging technologies integrated with new/enhanced application functionalities to meet demanding mission requirements.

TDIS

TDIS supports those applications and hardware utilized by the Unit Move, Sustainment and FDP&P Communities. The following applications support the development of Unit Deployment Lists, Air and Ship Load plans, movement coordination, sustainment, distribution/receipt of supplies and In-Transit Visibility. W2W supports the Last Tactical Mile/ITV.

Unit Move

MAGTF II Deployment Support System II

Integrated Computerized Deployment System (ICODES) (JOINT)

Automated Air Load Planning System (AALPS) (JOINT)

Sustainment

Cargo Movement Operations System (CMOS) (JOINT)

Automated Manifest System-Tactical (AMS-TAC) (Multi Service)

Warehouse-To-Warfighter (W2W) (Bridging technology)

FDP&E

Joint Force Requirements Generator II (JFRG II)

AGENDA

System/Hardware Requirement Identification

- Where does the requirements come from:
  - TDIS Working Groups
  - Integrated Product Teams (IPT)
  - Preliminary Design Reviews (PDR)
  - Engineering Change Proposals
- How are they approved
  - Operating Forces

AGENDA

Software/Hardware Fielding

- Software/Hardware is tested during GAT
- Software/Hardware is submitted for NMCI certification (Will be submitted for ISNS also)
- All ATO/ATC's are received
- Software is also distributed by CD's
- Hardware is fielded based on recommendations from the Working Groups.
- Hardware fielding plans are developed and staffed
- All Hardware requirements should be vetted through Unit's Higher Headquarters

AGENDA

Software/Hardware Fielding

- Plotters are planned to be purchased during 1st QTR FY08
- Mobile Readers are scheduled to be distributed upon successful GAT (Jul)
- Handheld Scanners
  - TDIS will extend the warranty to the end of FY08
  - TDIS/AIT will solicit Future AIT requirements
    - Passive/Active/UID

AGENDA

Test and evaluation

- TDIS conducts numerous test with Software/Hardware
- GAT is scheduled for JUL 2007. Draft MSG avail for review

ICODES/MDSS II/AALPS

- ICODES - MDSS II Data-sharing
- Automated Load Planning
- ICODES Stow Framework (ISF)
  - ICODES Air (ICODES / AALPS Integration)
  - ICODES Rail
  - ICODES TAVB

ICODES – MDSS II Data Sharing

- MDSS II contains all unit equipment and personnel deployment information.
- ICODES contains the same information for use in ship loading.
- Eliminates excessive database management (managing data in two places).
- Allows for seamless data transfer between the applications.
- Will be released in version 5.4.3 after passing the Government Acceptance Test (GAT), July 2007

ICODES Automated Load Planning

- Leverages the use of Automatic Identification (AIT) and Wireless Technology (MWEN).
- Users can scan items as they are loaded on the ship and simultaneously update the master load plan.
- Decreases manpower requirements by transferring data wirelessly and in real-time.
- Used in conjunction with ICODES observer gives the ship's captain and unit commander, real-time visibility of the loading or unloading process.
- Through the ICODES Stow Framework, this functionality could be utilized for rail and air loading and unloading, as well as yard and throughput management.

ICODES Stow Framework

- Technology developed to allow for multiple “plug-ins” using the same central database.
- Plug-ins include Air, Sea, Rail, and TAVB.
- Allows for each plug-in to handle data with it’s own peculiarity while sharing the data with other plug-ins.
- Different plug-ins for different modes, Sea, Air, and Surface, allows the ability to plan a complete unit deployment in a single system.

ICODES Air

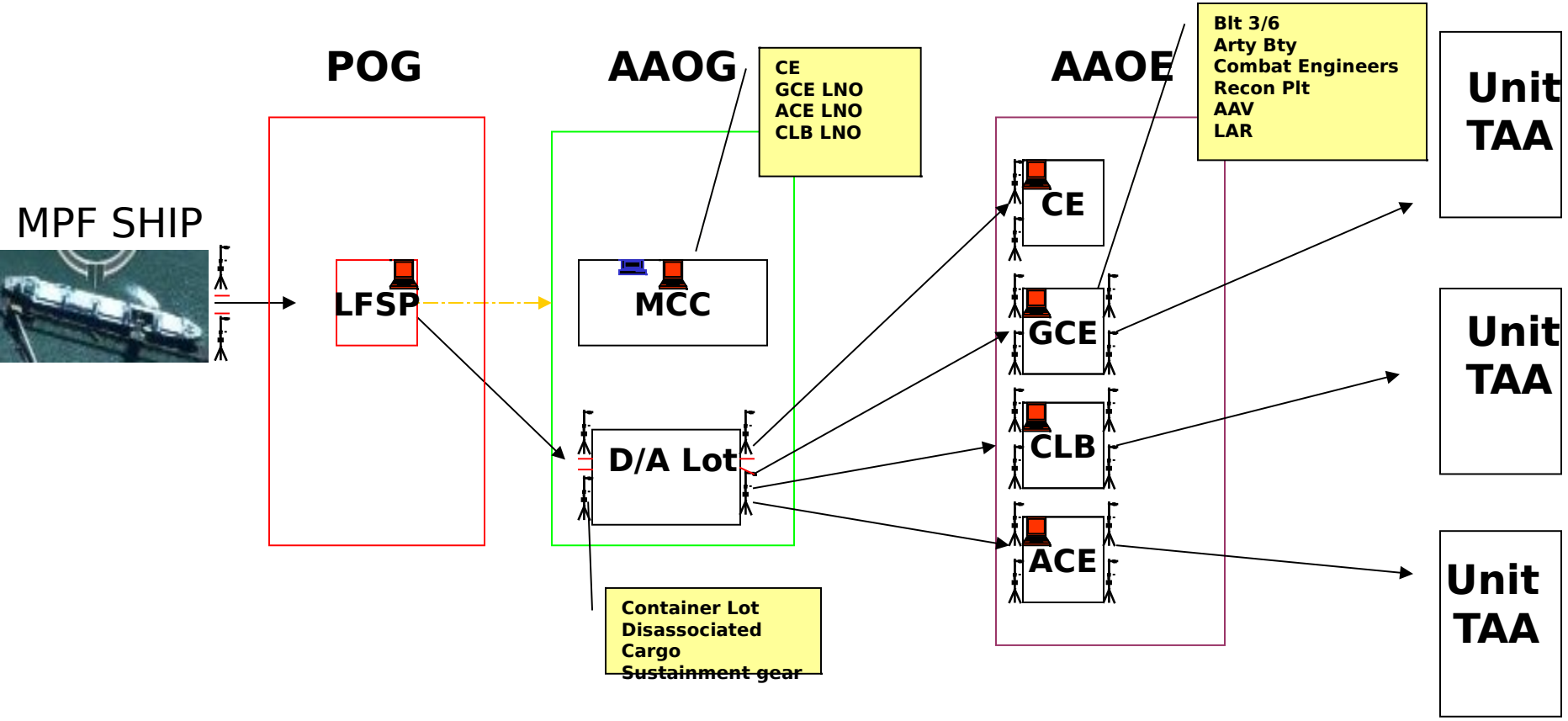
- USMC initiated Proof of Concept (POC).
- POC scheduled to be completed by the end of August, 2007.
- Based on the ISF.
- Limited Air Load Planning functionality.
  - Boeing C-17, Standard Air-Land configuration.
- USTRANSCOM and SDDC are showing considerable interest and enthusiasm.

Enhanced Arrival and Assembly Operations

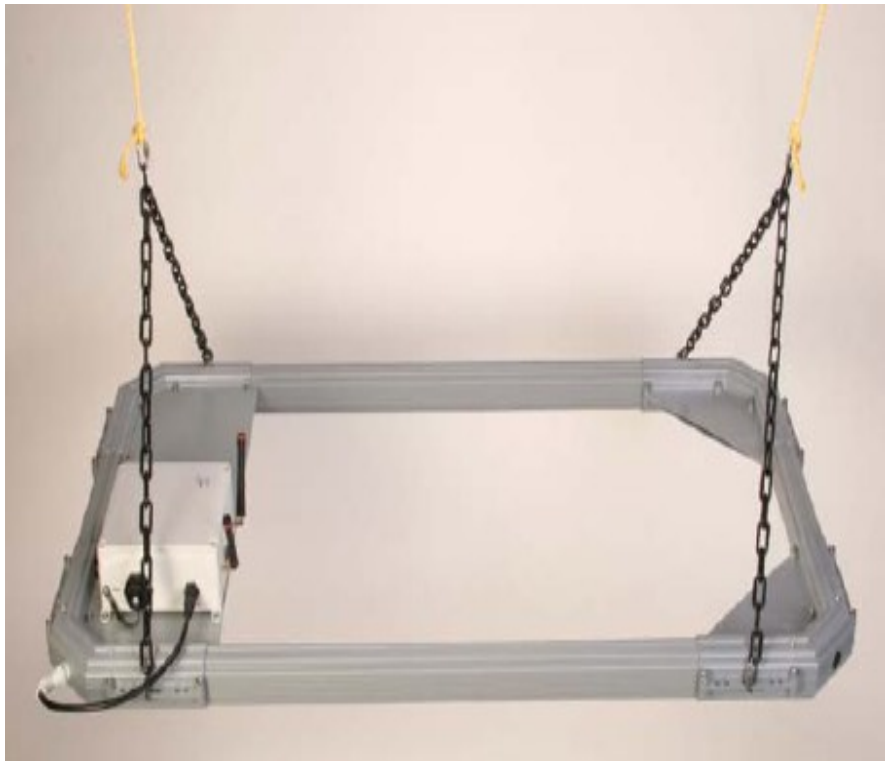
MARCORSYSCOM, TDIS Section will automate the capture of DATA with existing LOGAIS applications and emerging technologies in order to reduce man hours required during Reception, Staging, Onward Movement, and Integration (RSO&I) Operations.

Overview

- Gladstone, Australia
- Current RFID Process flow
- RFID Flow with Sign Posts
- MDSS II Sign Post Support
- Tripod Configuration
- Savi Sign Posts
- Wireless Infrastructure
- Time Line

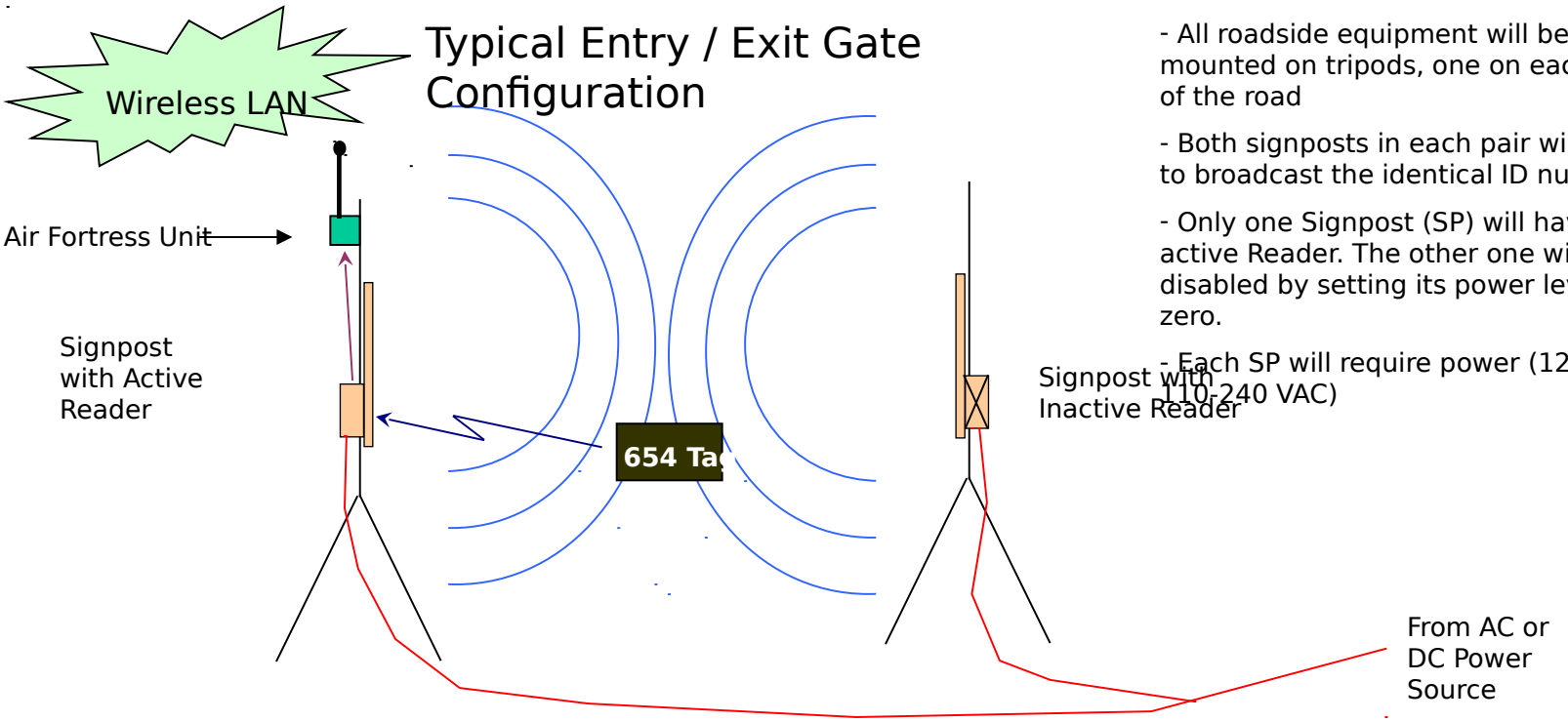

POG
AAOG
AAOE
MPF SHIP
LFSP
MCC
D/A Lot
CE
GCE LNO
ACE LNO
CLB LNO
Blt 3/6
Arty Bty
Combat Engineers
Recon Plt
AAV
LAR
CE
GCE
CLB
ACE
Unit TAA
Unit TAA
Unit TAA
Container Lot
Disassociated
Cargo
Sustainment gear
MDSS II
Site Manager
Savi Sign Post

Savi Signpost SP-652-211



- Reader Combo
- Adjustable, well-defined range of up to 12 feet (3.66 m)
- Fully configurable operation, including data transfer
- Globally approved frequency
- Rugged, weather proof, for outdoor or indoor use

Typical Entry / Exit Gate Configuration

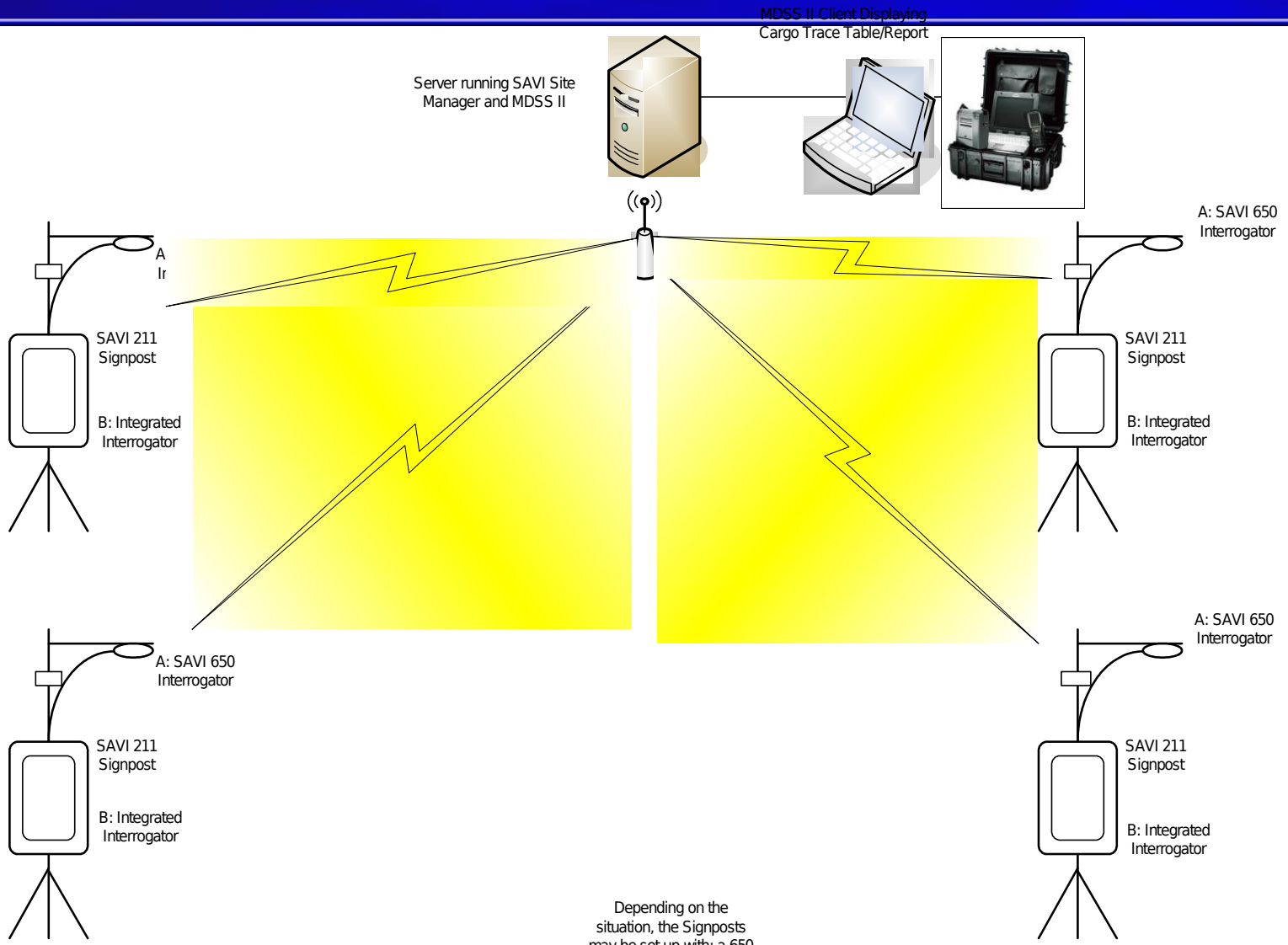


- All roadside equipment will be mounted on tripods, one on each side of the road
- Both signposts in each pair will be set to broadcast the identical ID number.
- Only one Signpost (SP) will have an active Reader. The other one will be disabled by setting its power level to zero.
- Each SP will require power (12 VDC or 110-240 VAC)

Legend

- Signpost wakes up passing tags (123 Khz, 12-15' range)
- Tag reports its ID # & SP # (433 Mhz, 200' range)
- Reader transmits Tag ID, Reader ID, and Timestamp to Site Manager (Ethernet)
- Electrical power (12 Volts DC or 110-220 Volts AC)

WIRELESS SOLUTION



Depending on the situation, the Signposts may be set up with: a 650 interrogator for long range, more robust tag captures, an interrogator integrated into the signpost, or both.

FORTRESS ES-520

ES 520 Specifications

- Range
  - 32 Miles (directional Antenna)
  - 7 miles (Omni directional Antenna)
- Performance
  - Up to 100 Secure Clients
- Encryption
  - AES-128, 192, 256
- Authentication
  - Internal and External RADIUS, PKI/CAC

ES 520 Specifications cont.

- Highly Portable
  - Dependable performance
    - Arid Mountains, Desert, and Jungle Environments
    - Pole Mounted and can de-ploy in a “Rapid Response Kit
- Rugged Design (“Marine Proof”)
- Easy to Configure
- High Assurance and Certified Security
  - Eliminates Hackers from intercepting network data, view network addresses or interrupt availability

Meeting	Date	Location	Remarks
MPF Ops With SAVI Tech	**Thursday, 22 March, 2007**	**NGC, Stafford VA Tarawa Conf Room**	**Key Players and Program Advocates**
Sign Post (Test Meeting)	April 11	NGC, Stafford VA	Sign Posts and Wireless Solution TEST PLAN and due outs for continue of process
III MEF MPF Meeting	April 16-20	Camp Courtney, Okinawa Japan	Tony Brill and Rob Palmatier attending
MPF Ops with SAVI Tech	April 26	NGC, Stafford, VA	Meeting and First Test
Sign Posts (Test #2)	May 8-9	Either on Quantico or at CBIRF	Packing Plan for Equipment
Sign Posts (Test #3)	May 14-18	Blount Island Command	
III MEF Exercise	July 3-9 (Regeneration) July 10-19 (Backload)	Gladstone, Australia	Selected TDIS Team members will attended

Deployable Automated Cargo Measurement System (DACMS)

- Provides an automated system to electronically weigh and measure cargo for deployments
- Automatically calculates the Center of Balance (CB) and Cube Data (Length, Width, Height, Weight, Axle Weight/Distance)
- Will send and receive data to/from MDSS II

DACMS

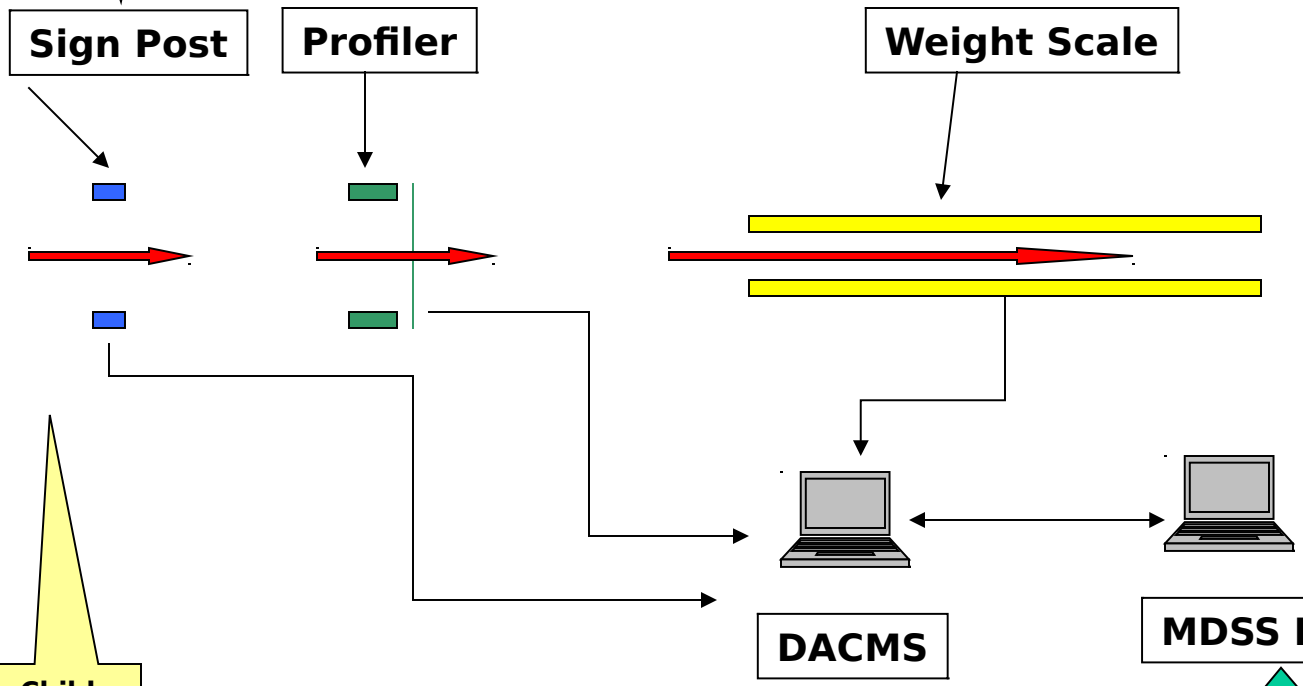
- Current Problems:
  - Current weight and measurement procedures for deploying assets are lengthy and inaccurate
  - Usually no means to weigh and measure assets for re-deployments
- Solution:
  - Automate the weighing and measuring process with a portable deployable system
    - Benefits
      - Accurate Data
      - Less time required for units to prepare
      - Deployable system to use while forward, for re-deployments

UNCLASSIFIED

The sign post will wake up the tag and identify the asset that is going through DACMS in MDSS II

The Profile will gather dimensional data and thru DACMS, it will populate the dimensional data for that PEI in MDSS II

The Wt. scale will update MDSS II data via, DACMS. It will also gather CB, and AXLE WT for each Axle, plus provide GVW.



If the Child has a RFID tag, That Childs Tag needs to be disregarded, and only the RFID Tags on the Parents need to be

With using the SAVI Sign Posts and DACMS, this process will ensure that accurate dimensional data is recorded in MDSS II. Further more, this can be a one-stop-shop both weighing and writing RFID TAGS

ED

Slide

DACMS

Profile System with
Adjustable Tripods
Portable Weight Scales
intercomp
intercomp

NMCI

- MDSS II v7.1 is NMCI certified for Radia Push
- ICODES v5.4 is NMCI certified for Radia Push
- AALPS v4.3.4.1 is NMCI certified as a local install
  - Path Statement
  - Message has been released
  - Additional Hardware to support units that are unable to load AALPS

Technical, Engineering and Assistance Team (TEAT)

Provide Operating Forces with ON-SITE Training, Fielding and Implementation support

Who

What

When

Where

How

Roles and Responsibilities

- Develop a TE&AT Charter

- Designate a Team Member to support each MEF/NAVFOR

- Coordinate with each MEF and prepare/publish a Support schedule.

Roles and Responsibilities

– Provide engineering support when installing new hardware and technology in support of the applications in the TDIS portfolio.

– Participate and provide training in support of New

Equipment Training for new versions.

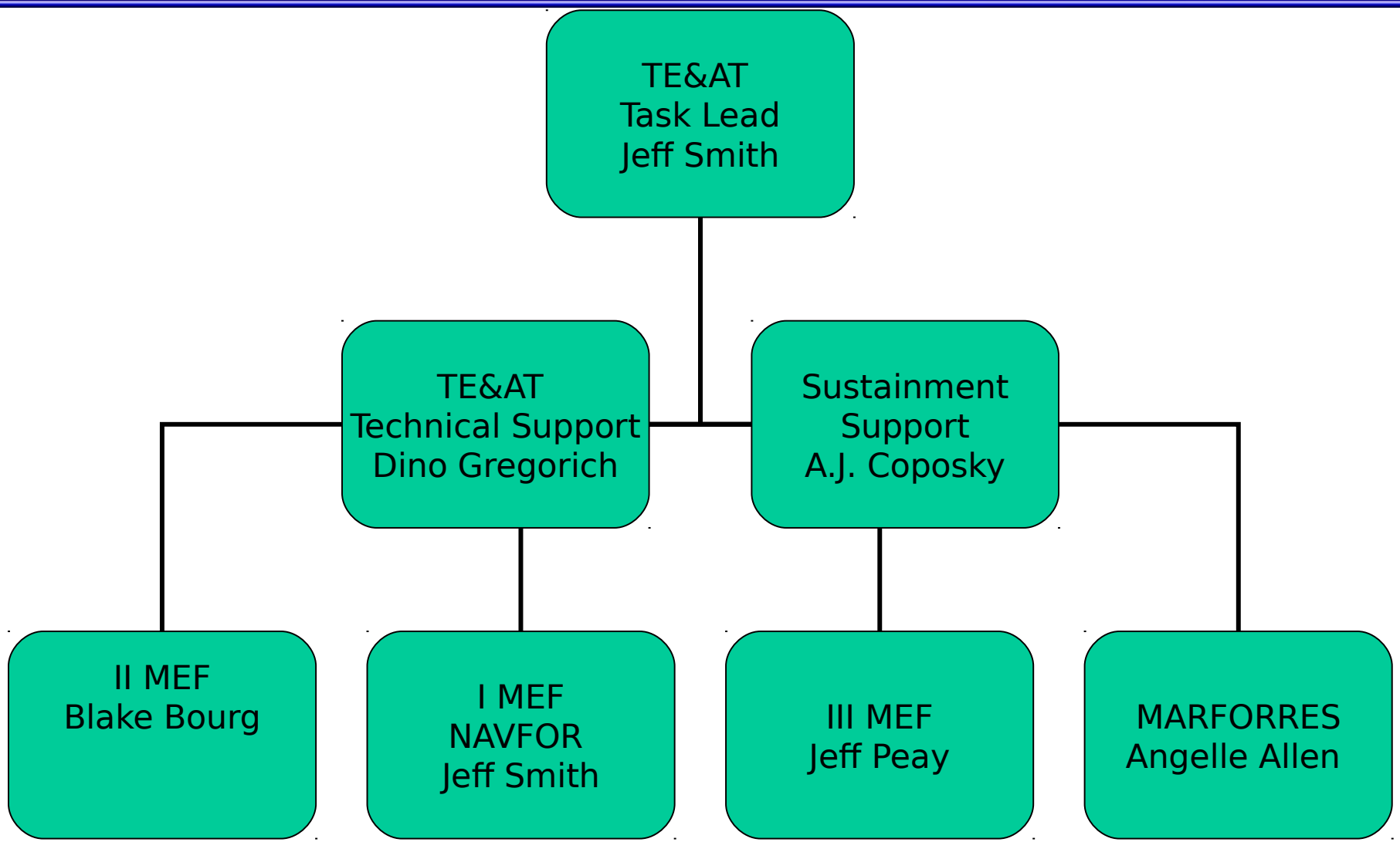
Roles and Responsibilities

- Prepare User handbooks, cheat sheets, etc
- Assist in troubleshooting any hardware, software problems.
- Serve as the front line for the User.
- A help desk capability will be provided.
- Monitor system/application operations.
- Ensure the applications, databases, and hardware are operating in unison with each other.

Roles and Responsibilities

- Identify technical enhancements.

- Configure networks to include the following components on the network:
  - Mobile Wireless Enterprise Network (MWEN) kits
  - Radio Frequency Identification (RFID) interrogators
  - RFID sign posts, handheld devices
  - Portable Deployment Kits (PDK)
  - Mini-desks as required.

- We are there to help and assist.
- We are not going to direct Units to do anything.
- We are not going to impact the FLC MTT’s
- Should be avail Mid Jun 2007

TE&AT Organization Chart